

4.4 AIR QUALITY

This section is based upon an October 2006 air quality report prepared by *Don Ballanti, Certified Consulting Meteorologist*. The report is included as Appendix E of this EIR.

4.4.1 Introduction and Regulatory Framework

Air pollution typically refers to air that contains chemicals in concentrations that are high enough to cause adverse effects to humans, other animals, vegetation, or materials. Air pollutants include those from natural sources (e.g., forest fires, volcanic eruptions, windstorms, etc.) and human sources (e.g., factories, transportation, power plants, etc.). In the Santa Clara Valley, vehicular emissions are the predominant source of air pollutants.

In recognition of the adverse effects of degraded air quality, Congress and the California Legislature enacted the Federal and California Clean Air Acts, respectively. As a result of these laws, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for what are commonly referred to as “criteria pollutants”, because they set the criteria for attainment of good air quality. Criteria pollutants include carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, and particulate matter.¹⁵ In general, the California standards are more stringent than the federal standards. Table 4.4-1 lists these pollutants, their sources and effects, and the related standards.

The Bay Area Air Quality Management District (BAAQMD) oversees air quality in the San Francisco Bay Area. BAAQMD periodically prepares and updates plans to achieve the goal of healthy air. Typically, a plan will analyze emissions inventories (estimates of current and future emissions from industry, motor vehicles, and other sources) and combine that information with air monitoring data (used to assess progress in improving air quality) and computer modeling simulations to test future strategies to reduce emissions in order to achieve air quality standards. Air quality plans usually include measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources. Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission (MTC), and the Association of Bay Area Governments (ABAG). Ozone Attainment Demonstrations are prepared for the national ozone standard and Clean Air Plans are prepared for the California ozone standard.

¹⁵In addition, state standards have been promulgated for lead, sulfates, hydrogen sulfide and visibility reducing particles. The state also recognizes vinyl chloride as a toxic air contaminant. Discussion of these criteria pollutants, however, will be limited as the project is not expected to emit these pollutants. Vinyl chloride and hydrogen sulfide emissions are generally generated from mining, milling, refining, smelting, landfills, sewer plants, cement manufacturing, or the manufacturing or decomposition of organic matter. As the proposed project does not contain any of these uses, they need not be addressed further in this EIR. As to lead, sulfate and visibility reducing particles, the state standards are not exceeded anywhere in the Bay Area; therefore, these pollutants are not relevant to air quality planning and regulation and need not be further addressed in this EIR.

TABLE 4.4-1
MAJOR CRITERIA AIR POLLUTANTS AND STANDARDS

	POLLUTANT					
	Ozone	Carbon Monoxide	Nitrogen Dioxide	Sulfur Dioxide	PM₁₀	PM_{2.5}
Health Effects	Eye irritation, respiratory function impairment	Aggravation of cardio-vascular disease, fatigue, headache, confusion, dizziness, can be fatal	Increased risk of acute and chronic respiratory disease	Aggravation of lung disease, increased risk of acute and chronic respiratory disease	Aggravation of chronic disease and heart/lung disease symptoms	Aggravation of chronic disease and heart/lung disease symptoms
Major Sources	Combustion sources, evaporation of solvents and fuels	Combustion of fuel, combustion of wood in stoves and fireplaces	Motor vehicle exhaust, industrial processes, fossil-fueled power plants	Diesel exhaust, oil-powered power plants, industrial processes	Combustion, cars, field burning, factories, unpaved roads, construction	Combustion, cars, field burning, factories, unpaved roads, construction
Federal Standard	1-hr: n/a 8-hr: .08 ppm	1-hr: 35 ppm 8-hr: 9 ppm	1-hr: n/a AA: 0.05 ppm	1-hr: n/a 24-hr: .14 ppm AA: 0.03 ppm	24-hr: 150 Φ g/m ³ AA: 50 Φ g/m ³	24-hr: 65 Φ g/m ³ AA: 15 Φ g/m ³
State Standard	1-hr: 0.09 ppm 8-hr: 0.07 ppm	1-hr: 20 ppm 8-hr: 9 ppm	1-hr: 0.25 ppm AA: n/a	1-hr: 0.25 ppm 24-hr: .04 ppm AA: n/a	24-hr: 50 Φ g/m ³ AA: 20 Φ g/m ³	24-hr: n/a AA: 12 Φ g/m ³
Bay Area Attainment Status	N	A	A	A	federal - A state - N	federal - A state - N

Notes:

Attainment Status: A = attainment N = nonattainment

n/a = no standard established

PM₁₀ = particulate matter, 10 microns in size PM_{2.5} = particulate matter, 2.5 microns in size

ppm = parts per million μ G/m³ = micrograms per cubic meter

AA = annual average 1-hr = 1-hour average 8-hr = 8-hour average

24-hr = 24-hour average n/a = not applicable

Source: U.S. EPA, Bay Area Air Quality Management District, 2005.

The Bay Area 2000 Clean Air Plan (CAP) was adopted by the BAAQMD Board of Directors at a public hearing on December 20, 2000 and was then submitted to CARB. The 2000 CAP is the third triennial update of the District's original 1991 CAP. The 2000 CAP includes strategies and policies for the region to achieve and maintain compliance with the standards listed in Table 4.4-1. The CAP also includes a control strategy review to ensure that the plan continues to include "all feasible measures" to reduce ozone, an update of the BAAQMD's emission inventory, estimates of emission reductions achieved by the plan, and an assessment of air quality trends.

The BAAQMD, in cooperation with MTC and ABAG, also recently completed preparation of the Bay Area 2005 Ozone Strategy. The Ozone Strategy is a roadmap showing how the San Francisco Bay Area will achieve compliance with the State one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins.

Ozone conditions in the Bay Area have improved significantly over the years and are expected to continue to improve.¹⁶ Ozone levels – as measured by peak concentrations and the number of days over the State one-hour ozone standard – have declined substantially as a result of aggressive programs by the BAAQMD, MTC and other regional, State and federal partners. This represents great progress in improving public health conditions for Bay Area residents. The 2005 Ozone Strategy provides useful background information on topics including the Bay Area's emission inventory, historical ozone trends and the implementation status of past control measures.

The 2005 Ozone Strategy explains how the Bay Area plans to achieve these goals with regard to ozone, and also discusses related air quality issues of interest including the public involvement process, climate change, fine particulate matter, the BAAQMD's Community Air Risk Evaluation (CARE) program, local benefits of ozone control measures, the environmental review process, national ozone standards and photochemical modeling. The 2005 Ozone Strategy is a comprehensive document that describes the Bay Area's strategy for compliance with State one-hour ozone standard planning requirements, and is a significant component of the region's commitment to achieving clean air to protect the public's health and the environment.

BAAQMD also operates its Toxic Air Contaminant Control Program, which implements and enforces all Maximum Achievable Control Technology (MACT) standards and Airborne Toxic Control Measures (ATCMs) pertaining to the emission of such substances from stationary sources. This program also monitors the concentrations of toxic air contaminants at various locations in the Bay Area.

In connection with the implementation of the CAP, various policies in the City's General Plan have been adopted to assist the City in avoiding or mitigating air quality impacts resulting from development projects that require approval of discretionary permits, such as area plans, use permits, site development permits, tentative tract maps, and tentative parcel maps. All future development addressed by this EIR will be subject to the air quality policies listed in Chapter 4, *Goals and Policies*, of the City's General Plan including the following:

- § *Air Quality Policy #1:* Consider cumulative air quality impacts and establish appropriate land uses and regulations to reduce air pollution.
- § *Air Quality Policy #2:* The expansion and improvement of public transportation services should be promoted.
- § *Air Quality Policy #5:* Design development near transit stations to promote transit usage.

¹⁶ Bay Area Air Quality Management District, *Bay Area 2005 Ozone Strategy*, 2006.

- § *Transportation Policy #8:* Vehicular, bicycle, and pedestrian safety should be factored into the design of streets & roadways.
- § *Transportation Policy #11:* The City should cooperate with transportation agencies to provide adequate, accessible, safe, attractive, and convenient transit services.
- § *Transportation Policy #16:* Pedestrian travel should be encouraged by providing pleasant, safe, and accessible pedestrian facilities.
- *Transportation Policy #22:* Pedestrian facilities should provide connectivity between uses.
- *Transportation Policy #41:* A safe, direct, and well-maintained bicycle network should be provided.
- *Transportation Policy #42:* Bike lanes are appropriate on arterial and collector streets.
- § *Transportation Policy #43:* Improvements to the Transportation Bicycle Network should be a priority.

In addition to the policies of the City's General Plan, the City has approved a grading ordinance, which mandates that all earth moving activities shall include requirements to control fugitive dust, including regular watering of the ground surface, cleaning nearby streets, damp sweeping, and planting any areas left vacant for extensive periods of time. All CVSP development will be subject to this ordinance.

4.4.2 Existing Air Quality

Under amendments to the federal Clean Air Act, the EPA has classified air basins, or portions thereof, as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. In 1988, the State Legislature passed the California Clean Air Act, which is patterned after the federal Clean Air Act to the extent that it also requires areas to be designated as "attainment" or "nonattainment," but, with respect to State standards, rather than national standards.

The City of San José lies within the urbanized portion of Santa Clara County, a subregion within the nine-county San Francisco Bay Area Air Basin (SFBAAB). As shown in Table 4.4-1, the Bay Area is designated as an "attainment area", meaning the area meets the relevant standards, for carbon monoxide, nitrogen dioxide, and sulfur dioxide. The region is classified as a "nonattainment area" for both the federal and state ozone standards. The area does not meet the state standards for particulate matter; however, it does meet with the federal standards.

As noted above, BAAQMD monitors air quality at various locations throughout the Bay Area, including three monitoring stations in San José. Table 4.4-2 summarizes recent data for these stations in terms of the number of days the applicable air quality standard was exceeded.

The air pollution potential of a given location depends upon the emission density in the surrounding area, as well as the atmospheric potential. Primary pollutant emission densities are highest in areas with high population density, heavy vehicle use, or industrialization. Yet, because the City of San Francisco has a low atmospheric pollution potential, it does not produce the highest ambient carbon monoxide (CO) levels. The Bay Area's highest CO concentrations are found in San José, where both the atmospheric pollution potential and the emissions are high.

TABLE 4.4-2 SUMMARY OF RECENT AIR QUALITY MONITORING DATA IN PROJECT AREA [Expressed as Number of Days Exceeding the Standard]													
Pollutant	Standard	San José Central			San Martín			Gilroy			Hollister		
		2003	2004	2005	2003	2004	2005	2003	2004	2005	2003	2004	2005
Ozone	State 1-Hr	4	0	1	9	0	2	6	0	0	0	0	0
Ozone	Federal 1-Hr	0	0	0	0	0	0	0	0	0	0	0	0
Ozone	Federal 8-Hr	0	0	0	4	0	0	2	0	0	0	0	0
CO	State/Federal 8-Hr	0	0	0	-	-	-	-	-	-	-	-	-
NO ₂	State 1-Hr	0	0	0	-	-	-	-	-	-	-	-	-
PM ₁₀	State 24-Hr	3	4	2	-	-	-	-	-	-	0	0	0
PM ₁₀	Federal 24-Hr	0	0	0	-	-	-	-	-	-	0	0	0
PM _{2.5}	Federal 24-Hr	0	0	0	-	-	-	-	-	-	-	-	-
CO = carbon monoxide NO ₂ = nitrogen dioxide PM = particulate matter													
Source: Air Resources Board, Aerometric Data Analysis and Management, 2006.													

For secondary pollutants, like ozone, which develop over periods of several hours and which are derived from two or more primary pollutants, the evaluation of the pollution potential of a location is more complex. The emission-related ozone potential at a given location depends upon precursor emissions that are upwind of (rather than adjacent to) that location on an episode day. The most direct way of evaluating the potential for exceeding the ozone standard is to review ambient monitoring data for recent years. Violations of the ozone standards are most likely to occur in an arc around the west, south and eastern sides of the Santa Clara Valley.

Despite the substantial growth of the Bay Area in recent decades, overall air quality has been improving. The improvement is primarily due to the implementation of measures that have reduced emissions from both stationary sources (e.g., factories, power plants, refineries, etc.) and mobile sources (e.g., automobiles, buses, trucks, aircraft, etc.). Complementing source-control measures are a variety of strategies, policies, and programs that are designed to improve air quality. These include programs to buy-back older automobiles and gasoline-powered lawnmowers, incentives for replacing older wood-burning stoves and fireplaces, incentives/subsidies for transit riders/carpoolers, incentives for purchasing low-emission products, Spare-the-Air campaigns, and local land uses policies that result in a reduction in the number/length of vehicle trips. The latter category includes locating jobs near housing, constructing mixed-use developments, and zoning land along rail corridors for higher densities.

Although the CVSP Area is within the SFBAAB and BAAQMD, the project is near the southern edge of the SFBAAB and BAAQMD that borders with the North Central Coast Air Basin (NCCAB) and the Monterey Bay Unified Air Pollution Control District (MBUPCD). The NCCAB is comprised of Monterey, Santa Cruz, and San Benito Counties. The San Benito Valley lies directly south of Santa Clara Valley and extends to the southeast. Hollister, at the northern end of the San Benito Valley, experiences west winds nearly one-third of the time. The prevailing air flow during the summer months probably originates in the Monterey Bay area and enters the northern end of the San Benito Valley by way of the air gap through the Gabilan Range occupied by the Pajaro River. Northwestern air flow frequently transports pollutants into the San Benito Valley from the Santa Clara Valley, particularly in the fall months when the normal sea breeze diminishes.

The NCCAB was re-designated from a moderate non-attainment area to a maintenance area in 1997 after meeting the federal 1-hour standard in 1990. The NCCAB is designated as unclassified/attainment for the federal 8-hour ozone standard. Under the California Clean Air Act, the basin is a moderate non-attainment area for the state 1-hour ozone standard. The air basin is also designated non-attainment for the state PM₁₀ standard. The MBUAPCD adopted the 1991 Air Quality Management Plan (AQMP), which addressed attainment of the state ambient air quality standard for ozone. In 1994, 1997, 2000, and 2004, the District adopted updates to the AQMP. The 2004 Air Quality Management Plan for the Monterey Bay Region is the current regional air quality plan.¹⁷

Existing Air Pollution Sources

The CVSP area contains few existing sources of air pollution. Roadways (US 101 in particular) are a source of mobile source emissions. Agricultural activities within the CVSP area are intermittent sources of dust and vehicular emissions. The major industrial source of pollutants affecting the project area is the Metcalf Energy Center (MEC), a 600-megawatt natural gas-fueled power plant located in the northern Greenbelt area near Metcalf Road that began operating in 2005. Annual emissions from this facility are estimated to be 124 tons per year of NO₂, 10.6 tons per year of SO₂, 589 tons per year of CO, 28.2 tons per year of Precursor Organic Compounds, and 91.3 tons per year of PM₁₀.

As part of an agreement between the City and MEC, air quality monitoring equipment was installed at Los Paseos Park to the north of the plant in late November 2004. Data is collected for concentrations of carbon monoxide, nitric oxides, and PM₁₀. During the period November 2004 through June 2006, no exceedances of the hourly standards for carbon monoxide or nitrogen dioxide were recorded. The state and federal PM₁₀ were not exceeded, but the state standard was approached in August and November 2005.

Toxic Air Contaminants

BAAQMD maintains an inventory of all stationary sources that emit toxic air contaminants (TACs) in the Bay Area. According to the current inventory of Toxic Air Contaminant emissions maintained by BAAQMD, there are no sources of TACs in the immediate CVSP area.¹⁸ Presumably, the MEC will appear on the list of sources when the inventory is updated. Another source of Toxic Air Contaminants in the project vicinity is the Kirby Canyon Landfill in the hills to the southeast. The United Technologies Corporation plant located on Metcalf Road in the hills to the northeast of the CVSP Area was also identified as a source; however, this plant is currently in the process of being closed. These two sources are both located at least two miles from the CVSP Development Area.

In addition to stationary sources, TACs are emitted in the project area from mobile sources, primarily motor vehicles. In this category, diesel exhaust is the chief source of TACs because it contains benzene and formaldehyde, both of which are listed as carcinogens. California has adopted a comprehensive diesel risk reduction program. The U.S. EPA has adopted low sulfur diesel fuel standards that will reduce diesel particulate matter substantially; these went into effect in June 2006. US 101 is the only freeway located within the CVSP Area. Because freeways carry significant amounts of traffic, including heavy diesel truck volumes, the CARB recommends against the siting of new sensitive land uses within 500 feet of a freeway.¹⁹

¹⁷ MBUAPCD, *2004 Air Quality Management Plan for the Monterey Bay Region*, September 2004.

¹⁸ BAAQMD, *Toxic Air Contaminant Control Program Annual Report 2002*, June 2004.

¹⁹ *Air Quality and Land Use Handbook*, CARB, April 2005.

Sensitive Receptors

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, and the acutely and chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, child care centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive receptors within the project area are residences located throughout the CVSP Development Area, but primarily along Dougherty and Scheller Avenues and Lantz Drive. The remainder of the area is primarily rural and agricultural.

Indirect Impacts

The USFWS has indicated concerns regarding the potential for nitrogen deposition from air pollution associated with overall development of urbanized areas to affect plant composition in serpentine grasslands and the bay checkerspot butterfly in the south Santa Clara County area. The discussion of this impact is included in Section 4.6, *Biological Resources*.

4.4.3 Air Quality Impacts

4.4.3.1 *Thresholds of Significance*

Based on BAAQMD guidelines, a General Plan or amendment to a General Plan is determined to be inconsistent with the most current Clean Air Plan (CAP), and therefore, to have a significant air quality impact, if the plan or plan change would:

- result in population growth that would exceed the values included in the current Clean Air Plan (CAP) for the City of San José; or
- cause the rate of increase in vehicle miles traveled (VMT) to be greater than the rate of increase in population.

In addition to the above thresholds, for the purposes of this EIR, an air quality impact is considered significant if the project would:

- violate an ambient air quality standard or contribute substantially to an existing or project air quality violation; or
- result in substantial emissions or deterioration of ambient air quality; or
- create objectionable odors; or
- expose sensitive receptors or expose the general public to substantial levels of toxic air contaminants; or
- alter air movement, moisture, or temperature, or result in any change in climate either locally or regionally.

According to the BAAQMD CEQA Guidelines, an air quality impact from a near-term (development) project is significant if the project would: 1) contribute to carbon monoxide concentrations exceeding the State Ambient Air Quality Standard of nine parts per million (ppm) averaged over eight hours or 20 ppm for one hour; or 2) generate criteria air pollutant emissions in excess of 80 pounds per day and/or 15 tons per year for nitrogen oxides, reactive organic gases, and PM₁₀.

4.4.3.2 *Short-Term Construction Impacts*

Build-out of the land uses included in the CVSP would involve construction that could last over several years, and perhaps decades. Construction activities may include demolition and removal of existing buildings or structures. All construction would likely include an initial grading of sites and then many small and medium size construction projects that could result in different air quality impacts based on their size, duration, and proximity to sensitive receptors. Construction activities would generate pollutant emissions from the following construction activities: grading, wind blowing over exposed earth, construction worker travel to and from project sites, delivery and hauling of construction supplies and debris to and from the project site, and fuel combustion by on-site construction equipment.

Construction activities are also a source of emissions associated with the use of solvents in adhesives, non-waterbased paints, thinners, and some insulating and caulking materials. These materials evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants.

Impact AQ-1: The proposed project would result in significant air quality impacts during construction. **[Significant Impact]**

Construction-related Toxic Air Contaminants

In 1998, the CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.²⁰ High volume freeway, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic were identified as having the highest associated risk.

During the build-out of the project, diesel-powered vehicles and equipment would be in use within the CVSP Development Area. Unlike the above-described types of sources, construction diesel emissions are temporary and mobile in nature; therefore, the bulk of the emissions would be expected to occur within the project site at varying distances from both existing and future sensitive receptors. Statewide emissions standards for heavy-duty construction equipment will be causing diesel particulate emission rates to drop over the build-out period of the proposed project. In addition, because of the short duration of construction at any one location, health risks from construction emissions of diesel particulates would be less than significant.

Impact AQ-2: Impacts associated with the use of diesel-powered construction equipment within then CVSP Development Area would be less than significant. **[Less than Significant Impact]**

²⁰CARB, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

4.4.3.3 Long-Term Regional Air Quality Impacts

Vehicle trips generated by the project would result in air pollution emissions affecting the San Francisco Bay and North Central Coast Air Basins (NCCAB). To evaluate the effects of proposed project on regional air quality, emissions of ozone precursor pollutants²¹ and PM₁₀ were predicted. The URBEMIS2002 Model, obtained from the CARB, was used to predict air pollutant emissions associated with project-related automobile use. This model combines assumptions for automobile activity (e.g., number of trips, vehicle mix, vehicle miles traveled, etc.) with vehicle emission factors. As shown in Table 4.4-3, the proposed project would generate regional pollutants in excess of BAAQMD significance thresholds.

The transportation information provided by *Hexagon Transportation Consultants* indicates that roughly 30 percent of the trips generated by the project would be traveling to locations south of the project site. Under the worst case assumption that emissions from vehicles traveling south of the project site either occur within the NCCAB or are transported into the NCCAB, daily emissions of ozone precursors affecting the NCCAB would be approximately 143 pounds per day of ROG, and 110 pounds per day of NOx. As shown in Table 4.4-3, the emissions of ROG would also exceed the MBUAPCD thresholds of significance of 137 pounds per day. Therefore, the project would also have a significant impact on regional air quality in the NCCAB.

TABLE 4.4-3 COMPARISON OF DAILY EMISSIONS OF REGIONAL POLLUTANTS		
Pollutant	Total Pounds per day*	Pounds per day in NCCAB**
ROGs	583	143
NOx	448	110
PM ₁₀	2,565	N/A
*BAAQMD thresholds for each of these regional pollutants is 80 pounds per day. **MBUAPCD threshold for ROG and NOx is 137 pounds per day. ROG = Reactive Organic Gas NOx = Nitrogen Oxides PM ₁₀ = Particulate Matter, 10 microns in size Source: Don Ballanti, Consulting Meteorologist, 2006.		

Impact AQ-3: The proposed project would generate regional pollutants in excess of BAAQMD and MBUAPCD significance thresholds. **[Significant Impact]**

4.4.3.4 Long-Term Local Air Quality Impacts

On the local scale, the project would increase traffic on the local street network, increasing carbon monoxide (CO) levels along roadways used by project traffic. CO emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high localized concentrations of CO. Therefore, to assess this impact, sixteen intersections that were studied for traffic impacts were

²¹ Ozone is formed in the atmosphere by a chemical reaction between reactive organic gas (ROG) and nitrogen oxides (NOx) under sunlight.

also evaluated for roadside CO concentrations. These are the intersections that are anticipated to experience the combination of highest traffic volumes and worst congestion. CO concentrations were predicted for these intersections through air dispersion modeling using the Caline4 Model. The modeling results were used to predict the maximum 1- and 8-Hour concentrations, corresponding to the 1- and 8-Hour averaging times specified in the state and federal ambient air quality standards for CO. [Note: For details regarding this model, including assumptions utilized as model input, please see Appendix E.]

The results of this analysis are presented in Table 4.4-4. The data indicate that concentrations of CO would not exceed the most stringent state/federal ambient air quality standards (20 ppm for 1-Hour and nine ppm for 8-Hour). Therefore, the CVSP would not result in a significant impact on local air quality over the long-term.

Impact AQ-4: Project traffic would not cause any new violations of the 1- or 8-hour standards for carbon monoxide, nor contribute substantially to an existing or projected violation. For these reasons, project impacts on local carbon monoxide concentrations would be less than significant. **[Less than Significant Impact]**

TABLE 4.4-4 CARBON MONOXIDE CONCENTRATIONS NEAR WORST CASE INTERSECTIONS (In Parts per Million)						
Intersection	Existing (2005)		Existing (2005) + Background		Background + Project	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
King Rd./Tully Rd.	6.5	4.5	7.0	4.8	7.2	4.9
McLaughlin Ave./Tully Rd.	8.6	5.9	9.2	6.4	9.4	6.5
Capitol Expwy./Silver Creek Blvd.	9.4	6.5	10.0	6.9	10.1	7.0
McLaughlin Ave./Capitol Expwy.	9.1	6.3	9.3	6.4	9.4	6.5
US 101/Blossom Hill Rd. (E)	7.2	5.0	9.8	6.8	10.0	6.9
US 101/Blossom Hill Rd. (W)	6.5	5.8	11.3	7.8	11.4	7.9
Almaden Expwy./Coleman Rd..	8.2	5.6	8.4	5.8	8.5	5.9
Almaden Expwy./Blossom Hill Rd.	8.6	6.0	8.9	6.1	9.0	6.2
Almaden Expwy./SR 85	10.0	6.9	10.5	7.2	10.6	7.3
US 101/Bernal Rd. (E)	6.5	4.5	7.8	5.4	8.8	6.1
SR 85/Bernal Rd.	7.0	4.8	9.4	6.5	9.4	6.5
Monterey Rd./Old Monterey Rd.	4.9	3.4	5.3	3.6	5.7	3.9
Monterey Rd./San Martin Ave.	5.8	4.0	5.9	4.1	6.0	4.1
Monterey Rd./Masten Ave.	5.2	3.6	5.8	4.0	5.9	4.0
Wren Ave./First St./SR 152	5.6	3.8	6.0	4.1	6.0	4.1
Future Coyote Pkwy./Bailey Ave.	--	--	--	--	8.1	5.6
Note: The most stringent state/federal ambient air quality standards are 20 ppm for 1-Hour and nine ppm for 8-Hour.						

Toxic Air Contaminants

The project does not propose any development within 500 feet of US 101. Therefore, the project would not result in the long-term exposure of the general public to substantial levels of mobile TACs.

As described in Section 4.4.2, there are no stationary sources of TACs in the CVSP Area. Sensitive land uses would not be located in proximity to the existing MEC, as shown on Figure 2.0-1. Future projects which include the use of diesel generators will install generators that meet CARB Risk Guidance and BAAQMD permit requirements regarding emissions below health risk thresholds (an increased cancer risk greater than 10 per million for either residential or workplace receptors).

Impact AQ-5: The proposed project would not result in exposure of the general public to substantial levels of TACs. Future urban development that requires the use of diesel-fueled generators will install generators that meet CARB and BAAQMD permit requirements regarding emissions. **[Less than Significant Impact]**

4.4.3.5 *Consistency with Clean Air Planning Efforts*

A key element in air quality planning is to make reasonably accurate projections of future human activities, particularly vehicle activities that are related to air pollutant emissions. The BAAQMD uses population projections made by the Association of Bay Area Governments and vehicle use trends made by the Metropolitan Transportation Commission to formulate future air pollutant emission inventories. These projections are based on estimates from cities and counties. In order to provide the best plan to reduce air pollution in the Bay Area, accurate projections from local governments are necessary. When General Plans are not consistent with these projections, they cumulatively reduce the effectiveness of air quality planning in the region.

As previously described, the 2005 Ozone Strategy explains how the Bay Area plans to address both the current federal and state ozone standards, based on population and travel projections. Because the development of a minimum of 25,000 housing units in the Coyote Valley was only envisioned in the San José 2020 General Plan, the development assumed in the 2005 Ozone Strategy does not include the development associated with the CVSP.

The project would result in an amount and intensity of growth in the CVSP Development Area that is not foreseen in the current General Plan, and therefore was not included in the population projections used for the 2005 Ozone Strategy. As shown in Table 4.4-3, the project would have significant increases in ROG emissions (ROG is an ozone precursor pollutant), when compared to the background condition. Therefore, the project would conflict with the Clean Air planning efforts. It should be noted that the proposed urban development would be served by transit and would also include commercial and workplace developments that would serve the project residential development, thereby internalizing vehicle trips within the valley. Further, to the extent that new housing reduces the need for people to seek housing outside the area, implementation of the CVSP could reduce emissions associated with lengthy home-to-work vehicle trips.

Impact AQ-6: The proposed project is not consistent with the population projections in the most recently adopted CAP. The project would, therefore, have a significant impact on long-term regional air quality. **[Significant Impact]**

4.4.4 Mitigation and Avoidance Measures for Air Quality Impacts

As previously described, the policies in the City of San José's 2020 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. Future CVSP development projects shall be subject to these General Plan policies, as well as the following standard measures to mitigate environmental impacts. Additional or modified mitigation measures may be identified based on subsequent environmental review, once specific development is proposed.

4.4.4.1 *Mitigation for Short-Term Construction Impacts*

- MM AQ-1.1:** All active construction areas shall be sprinkled with water at least twice daily and more often when conditions warrant, excluding any areas that are inaccessible to watering vehicles due to excessive slope or other safety conditions.
- MM AQ-1.2:** All trucks hauling soil, sand and other loose materials shall be covered. Alternatively, all trucks shall be required to maintain at least two feet of freeboard, consistent with the requirements of §23114 of the California Vehicle Code.
- MM AQ-1.3:** All unpaved access roads, parking areas and staging areas at construction sites shall be watered three times daily. Alternatively, non-toxic soil stabilizers shall be applied in sufficient quantity and frequency to maintain a stabilized surface.
- MM AQ-1.4:** All paved access roads, parking areas, and staging areas at construction sites shall be swept daily. Water sweepers shall vacuum up excess water to avoid runoff related impacts to water quality.
- MM AQ-1.5:** Streets shall be swept daily if visible soil material is carried onto adjacent public streets.
- MM AQ-1.6:** Inactive (10 days) construction areas shall be watered on a daily basis, or hydroseeded or non-toxic soil stabilizers shall be applied, as appropriate.
- MM AQ-1.7:** Exposed stockpiles (dirt, sand, etc.) shall be enclosed, covered, water twice daily, or non-toxic soil binders shall be applied.
- MM AQ-1.8:** Traffic speeds on unpaved roads shall be limited to 15 miles per hour.
- MM AQ-1.9:** Sandbags or other erosion control measures shall be installed and maintained to prevent silt runoff to public roadways.
- MM AQ-1.10:** Inactive disturbed surface areas shall be appropriately revegetated within twenty-one (21) days after active operations have ceased.
- MM AQ-1.11:** Trucks and equipment leaving construction sites shall have accumulated dirt removed from wheels, as needed.

- MM AQ-1.12:** Grading activities shall be suspended when winds exceed 25 miles per hour (mph) and visible dust clouds cannot be prevented from extending beyond active construction areas. Wind breaks shall be constructed at the windward side of the construction area(s), as necessary.
- MM AQ-1.13:** All construction equipment shall be properly maintained and include emission control devices, consistent with manufacturers' recommendations.
- MM AQ-1.14:** The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors).
- MM AQ-1.15:** Diesel equipment standing idle for more than two minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite.
- MM AQ-1.16:** Excavation, grading, and other construction activities shall be limited based on size, duration, and amount of excavation to reduce air quality impacts in any one area of the CVSP Development Area.

4.4.4.2 *Mitigation for Long-Term Regional Air Quality Impacts*

- MM AQ-3.1 and 6.1:** New bus stops shall be constructed at convenient locations with pedestrian access to the project developments. Pullouts will be designed so that normal traffic flow on arterial roadways would not be impeded when buses are pulled over to serve riders.
- MM AQ-3.2 and 6.2:** Bicycle amenities shall be provided on each project development site. Each site will be reviewed and appropriate bicycle amenities shall be included. As appropriate, this shall include secure bicycle parking for office and retail employees, bicycle racks for retail customers and bike lane connections throughout each project site.
- MM AQ-3.3 and 6.3:** All buildings shall include outdoor electrical outlets so as to encourage the use of electrical landscape maintenance equipment.
- MM AQ-3.4 and 6.4:** Shuttle bus service shall be provided to regional transit centers, including the proposed multi-modal Caltrain station and the Santa Teresa LRT station.
- MM AQ-3.5 and 6.5:** All feasible and reasonable Transportation Demand Management program measures such as ride-matching programs or guaranteed ride home programs shall be implemented. Other components of a TDM program could include employer-subsidized VTA Eco Passes, showers and lockers for employees that bicycle or walk to work, on-site child care, preferential parking for electric or alternatively-fueled vehicles, a car share program, and a parking cash-out program for employees (i.e., non-driving employees receive transportation allowances equivalent to the value of subsidized parking). The specific mix of TDM measures shall be determined at during the permit stage, to the satisfaction of the Director of Planning, Building, and Code Enforcement.

- MM AQ-3.6:** All fireplaces to be installed in residences shall comply with the San José Wood-Burning Appliance Ordinance (#26133).
- MM AQ-3.7:** Utilize reflective and emissive roofs (“cool roofs”) and light colored construction materials to increase the reflectivity of roads, driveways, and other paved surfaces, and include shade trees and landscaping near buildings to directly shield them from the sun’s rays and reduce local air temperature and cooling energy demand.

4.4.5 Conclusions Regarding Air Quality Impacts

- Impact AQ-1:** The proposed project would result in significant air quality impacts during construction. These impacts will be avoided/mitigated by implementing the above-described mitigation measures (MM AQ-1.1 through 1.15). **[Less than Significant Impact with Mitigation Incorporated]**
- Impact AQ-2:** Impacts associated with the use of diesel-powered construction equipment within the CVSP Development Area would be less than significant. **[Less than Significant Impact]**
- Impact AQ-3:** The proposed project would generate regional pollutants in excess of BAAQMD and MBUAPCD significance thresholds. Implementation of standard measures would reduce this impact (MM AQ-3.1 through 3.7), but the impact cannot be reduced to a less than significant level. A statement of overriding considerations will be necessary for long-term regional air quality impacts. **[Significant Unavoidable Impact]**
- Impact AQ-4:** Project traffic would not cause any new violations of the 8-hour standards for carbon monoxide, nor contribute substantially to an existing or projected violation. For these reasons, project impacts on local carbon monoxide concentrations would be less than significant. **[Less than Significant Impact]**
- Impact AQ-5:** The proposed project would not result in exposure of the general public to substantial levels of TACs. Future urban development that requires the use of diesel-fueled generators will install generators that meet CARB and BAAQMD permit requirements regarding emissions. **[Less than Significant Impact]**
- Impact AQ-6:** The proposed project would conflict with current Clean Air planning efforts because it would result in an increase in population in the CVSP Development Area that is not included in the projects used for the 2000 Bay Area Clean Air Plan or the 2005 Ozone Strategy. **[Significant Unavoidable Impact]**